A MANUAL

TO ACCOMPANY

BANCROFT'S

Topical Teaching Charts:

U. S. HISTORY,
PHYSIOLOGY,
GEOGRAPHY.

PREPARED BY

PROF. C. W. CHILDS,

OF THE

California State Normal School.

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PREFACE.

This little manual is intended to be suggestive. The common method of teaching History, Geography and Physiology, by assigning a lesson or two in a school book, and requiring pupils to memorize the text, has not produced satisfactory results.

I think there can be no question about the superiority of the topical method of study over any other. It is the only method of studying which men pursue in business or professional life, and the earlier one becomes accustomed to it the better.

Assign the lessons by topics; let the pupils use the Text-Books and the school library for reference in preparing their lessons; take the Text-Book away from the pupils, *and the teacher too*, during recitation, and do not ask "leading questions," but require pupils to tell what they know about the subject.

With the Topical Charts in the school-room, and this manual in the hands of the pupils, a non-uniformity of Text-Books is a benefit, rather than a disadvantage to the class, and it is certainly a great saving to patrons of our schools.

> "There is no 'patent method' for teaching history. In this study, more than in most other elementary school branches, the teacher, by his skill, tact, and stores of information, must clothe the skeleton of facts with the flesh of imagination, and breathe into it, the breath of life. But, rightly pursued, it has the two characteristics of a useful study, namely,—good mental exercise and useful information. JOHN SWETT."

Hoping that these charts may, at least, suggest a better plan of work, they are respectfully submitted.

C. W. C.

BOOKS FOR REFERENCE.

BEST GENERAL WORK.

Harper's Encyclopedia of U. S. History; by Lossing, 2 vols, Cloth, $12. Sheep, $15.

CONDITION OF EUROPE IN 15TH CENTURY.

Outlines of the World's History; by Swinton, $2.

EARLY INHABITANTS.

HISTORY. Ancient America; by Baldwin, $2.—Prehistoric Races of America; by Foster, $3.

FICTION. Wyandotte; by Cooper, $1.

DISCOVERIES AND EXPLORATIONS.

HISTORY. Spanish Conquest of America; by Helps, 4 vols., $6.—The Pioneers of France in the New World; by Parkman, $2.50.—Discovery of America by the Norsemen; by Anderson, $1.—Half Hours with Early Explorers (English explorers principally); by Frost, $2.—Young Folks' Book of American Explorers; by Higginson, $1.50.

BIOGRAPHY. Columbus; by Irving, 3 vols., $3.75.—Abbott's De Soto, $1 25.—Towle's Heroes of History, Da Gama, Magellan, Pizarro, Marco Polo, Ralegh; each $1.25.

FICTION. Westward Ho!; by Kingsley, $1.75.

COLONIAL TIMES.

HISTORY. The English Colonies in America; by Lodge, $3.—Old Times in the Colonies; by Coffin, $3.—Jesuits in North America; by Parkman, $2.50—Conquest of Mexico; by Prescott, 3 vols., $6.—Conspiracy of Pontiac; Parkman, 2 vols., $5.

BIOGRAPHY. Abbot's Miles Standish and Stuyvesant; each $1.25.—Wm. Penn, $1.25.—Eggleston's Famous Indians; Tecumseh, Red Eagle, Pocahontas, Montezuma, Brandt, Red Jacket; each, $1.25, or set for $6.25.

FICTION. Last of Mohicans; by Cooper, $1.—Scarlet Letter; by Hawthorne, $2.—Wolfert's Roost; by Irving, $1.25.—The May Flower; by Mrs. Stowe, $1.50.

REVOLUTION.

HISTORY. The Boys of '76; by Coffin, $3.—Historical Views of the Revolution; by Greene, $1.50—Border Wars of the Revolution; by Stone, $1.50.

BIOGRAPHY. Washington; by Irving, 5 vols., $6.25, (Best History of Revolution.)—Parton's Franklin; 2 vols., $4.—Parton's Jefferson; $2.—Burr; 2 vols., $4.—Paul Jones; by Mackenzie, $2.—Gen. Greene; by G. W. Greene, 3 vols., $12.—La Fayette; by Headley, $1.50.—Marion; by Weems, $1.25.

FICTION. Septimius Felton; by Hawthorne, $1.25.—Spy and Pilot; by Cooper, each, $1.

CONSTITUTIONAL PERIOD.

HISTORY. Rise of the Republic; by Frothingham, $3.50.—American Politics; by Johnson, 75c.—The Story of the U. S. Navy; by Lossing, $1.75.—The Mexican War; by Jennings, $1.50.—Schouler's Constitutional History; 2 vols., $6.—Lewis & Clarke's Expedition; 2 vols., $1.50.—War of 1812; by Lossing, $7.—The Federalist; $2.50.

BIOGRAPHY. Parton's Jackson, 3 vols., $6.—Webster; by Teft, $1.50.—Clay; by Greelev, $150.—John Q. Adams; by Seward, $1.50.—Noah Webster; by Scudder, $1.25.—Madison, 3 vols., $10.

FICTION. Judd's Margaret (New England Life), $1.50.

CIVIL WAR.

HISTORY. Draper's American Civil War; 3 vols , $10.50. —Campaigns of the Civil War; 12 vols., each $1.— Farragut and our Naval Commanders; Headly, $3.50. —Youths' History of the Rebellion; 4 vols., $5.

BIOGRAPHY. Lincoln ; by Leland, $1.25. — Jefferson Davis and Stonewall Jackson, $1.75.

FICTION. The Amber Gods; Spofford, $1.50.—Inside : a Chronicle of Secession; by Baker, $1.25.

ADDITIONAL BOOKS.

Politics for Young Americans; by Nordhoff, $1 00.
Protection and Free Trade; by Butts, $1 25.
Alphabet of Finance; by McAdam, $1 25.
Introduction to Political Economy; Perry, $150.
Civil Service Reform in Gt. Britain; Eaton, $2 50.
Timbs's History of Great Inventions; $2 00.
Manual of American Ideas; Hopkins, $1 50.

SCHOOL HISTORIES.

Ridpath's History of U. S., $1 00, $3 50.
Young Folks' History of U. S.; by Higginson, $1 50.
Eclectic History; by Thalheimer, $1 25.
Scott's History; $1 25.
Barnes' History; 1 25.
Anderson's History; $1 25.
Quackenbos's New History; $1 25.

This list of books is not intended to be exhaustive, or to meet all the wants of advanced students; but rather to aid those who are desirous of becoming acquainted with the most important events in the history of the United States, and have but little time to read, and no money to spend unprofitably.

C. W. C.

TOPICAL ANALYSIS OF U. S. HISTORY.

To be used in connection with the Chart.

Considerable attention should be given to Geography in its connection with History. It is certain that an accurate knowledge of History cannot be acquired and retained without a full and clear knowledge of its accompanying Geography. Events to be remembered must be associated with place. Teachers, therefore, should require pupils to prepare a map for each epoch.

GEOGRAPHICAL KNOWLEDGE IN 1492.

- Draw on the blackboard, and require pupils to draw on paper, a map, showing the world as known to people in the 15th century. (See Swinton's Outlines of History, page 308, or Scotts', page 2.
- Why were people so ignorant of the geography of the world?
- What attempts had been made to increase geographical knowledge?

CONDITION OF EUROPE.

- Short account of most important nations.
- Name and locate important commercial cities.
- Why were the principal commercial cities on the Mediterranean?
- What was the *commercial problem* of the age?
- Why?
- Why had America remained so long unknown to people?

Compass.	What Nation Invented?
Astrolabe.	When and Where?
Printing.	How Used at first?
Gunpowder.	Effect upon Commerce and Discovery?

DISCOVERIES AND EXPLORATIONS.

(SEE QUESTIONS ON CHART.)

Draw a map on the black-board of the Atlantic Ocean, (See Eclectic Hist. page 16, or Barnes's, page 16.) Use colored crayons in marking the route of the explorers of different nations. Blue for Spanish, red for English, etc., etc.

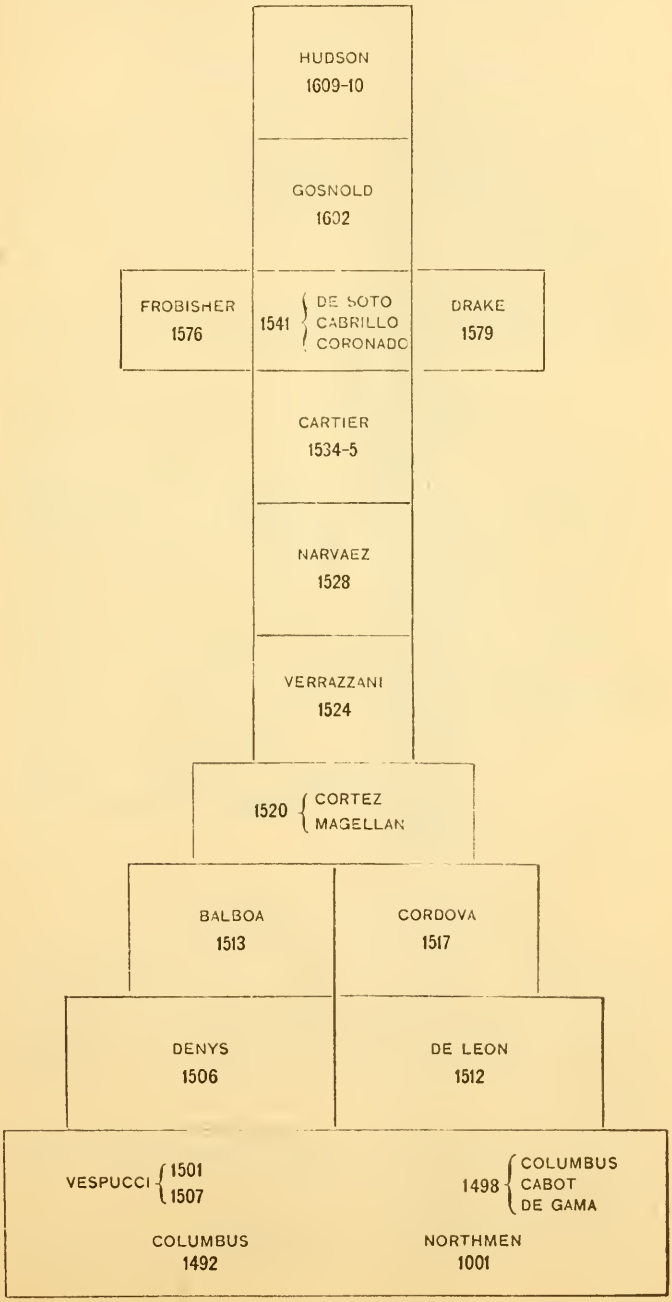
Require pupils to draw a map on paper, at least 18x20 in. Use these maps in daily recitations, marking routes, locating geographical points and inserting important dates.

In order to obtain a comprehensive grouping of the principal dates and facts of this period, the following plan may be used to good advantage: Sketch on the black board and require pupils to draw on paper, a plain monument (see next page), and shade it at the right to make it stand out in relief. In the various divisions write names, dates, etc. Underline those that are especially important.

To fix in the memory the date and place of settlement of the thirteen colonies, an arch may be constructed, on the board and on paper (see page 16), and dates and names written upon the various blocks.

MOUND BUILDERS. { See questions on Chart. Read chapter 2 in Higginson's History. Call attention to Cliff Builders and recent discoveries in Arizona and New Mexico.

INDIANS AND AZTECS. { See questions on chart. Draw a map on the blackboard and locate principal tribes. (See Anderson's History.) Give a brief account of the Aztecs.


HUDSON
1609-10
GOSNOLD
1602
FROBISHER
1576
1541
DE SOTO
CABRILLO
CORONADO
DRAKE
1579
CARTIER
1534-5
NARVAEZ
1528
VERRAZZANI
1524
1520
CORTEZ
MAGELLAN
BALBOA
1513
CORDOVA
1517
DENYS
1506
DE LEON
1512
VESPUCCI
1501
1507
1498
COLUMBUS
CABOT
DE GAMA
COLUMBUS
1492
NORTHMEN
1001

HISTORY OF SETTLEMENTS.

When you commence the study of the settlement of the Colonies, sketch on the black-board, and require pupils to draw on paper, an outline map of that part of North America east of the Mississippi, and extending from the Gulf of St. Lawrence to the Gulf of Mexico. Represent the mountains, lakes and principal rivers.

As you progress in the study of the colonies, mark upon the map the settlements, political divisions, battlefields and dates. On the black-board use colored crayons as in map of discoveries.

SPANISH AND FRENCH SETTLEMENTS.

You will not have time to study exhaustively all the questions pertaining to the settlements made by these nations, but the following points should be carefully examined:

When, where and why did the Spanish make settlements within the present limits of the United States? Cause of trouble between Spanish and English colonies. Results. Account of Jesuit Missions in California. Spanish treatment of Indians.

When, where and why did the French make settlements? Effect of Champlain's campaign against the Iroquois in preventing the extension of French settlement southward. Causes of trouble between French and English colonists. Results. French treatment of Indians. Compare population and extent of claims with the English.

Study of English Settlements.

In order to understand the motives that induced people to found colonies in America, you must know something of the history of Europe during this period. You must, therefore, give special attention to the history of England, France, Spain and Holland from 1600 to 1663. Bancroft says, "The history of the colonization of America is a history of the crimes of Europe."

During this and in subsequent periods of our history, especial attention should be given to the *Philosophy of History*—the causes and effects of events. Much time may be saved by grouping colonies for study. (See chart.)

Lodge's History of the English Colonies, and Coffin's Old Times in the Colonies, are excellent books for this period.

STUDY THESE COLONIES TOGETHER :

VIRGINIA AND MARYLAND.

- **When. Where. Why Settled. By Whom.**
  - Dates—1607, 1634.
  - Centers of settlements in each Colony.
  - Causes that led to settlement.
  - Nationality.
  - Character of Colonists.
  - Class of people.
- **Government.**
  - Define the different kinds of governments in the Colonies—Royal, Charter, Proprietary and Commercial Corporation. (See Swinton, page 84.)
  - Kind of government in these Colonies.
  - Character of governors.
  - What voice had the people in the government.
  - An account of land grants.
- **Religion and Education.**
  - Sects. Provision for support.
  - Influence on the people.
  - What colleges.
  - What attention to public schools. Why.
  - Printing and literature.
- **Political Troubles. Religious Troubles. Indian Troubles.**
  - Clayborne's rebellion.
  - Bacon's rebellion.
  - Changes in government.
  - Navigation acts.
  - Cause of religious trouble in Maryland. Result.
  - Massacres of '22 and '44.
  - Cause. Results.
- **Noted Men.**
  - Smith.
  - Baltimore.
  - Clayborne.
- **Customs.**
  - Private and public buildings.
  - Utensils. Dress.
  - Plantations.
  - Social customs.
  - Traveling facilities.
  - Money.
- **Events.**
  - Review important points.
  - Slavery. When. How. Effect.
  - Rank of Colonies in population and wealth.
  - Origin of names.
- **Productions.**
  - Tobacco. When. How. Effects.
  - Other products of the soil.
  - Game. Furs.
- **Contemporaneous History of Europe.**
  - Show what effect the quarrels between nations, and the persecution of people for political and religious reasons, had upon settlement of Colonies.

STUDY THESE TOGETHER :

MASSACHUSETTS.

- **When.** — Dates—1620–30, 1623, 1635, 1636.
- **Where.** — Centers of settlements in each Colony.
- **Why Settled.** — Nationality. Class of people. Character of colonists.
- **By Whom.** — Difference between Pilgrims and Puritans.
- **Government.** — Kind (see Vir. and Md.) Governors. Voice of people in governm't. Changes in form of " Land grants to companies.
- **Religion and Education.** — Sects—how supported. Effects upon the people. Religious intolerance. Churches and ministers. Common schools. When. How. What. Colleges. When. Where. How supported. Literature. Printing.

CONNECTICUT.

- **Political** — Character of governors. With Dutch and French. Navigation acts. Changes in form of governm't.
- **Religious** — Salem witchcraft. Witchcraft in Europe at this period.
- **Indian** — Indian and French from 1689 to 1763. Pequod and King Philip's— Dates, causes, events, results.

TROUBLES.

RHODE ISLAND.

- **Customs.** — Architecture. Utensils. Dress. Traveling. Church customs. Apprenticeship. Social customs. Origin of Thanksgiving. Money and trade. Methods of punishment.
- **Noted Men.** — Williams, Standish, Bradford, Endicott, Eliot, Andros.

NEW HAMPSHIRE.

- **Events.** — Review important points. Slavery—compare with same in the South. Union of Colonies in 1643. Charter oak. Origin of names. Rank of Colonies in pop. and wealth. An account of Maine.
- **Productions.** — Products of the soil. Manufactures. Fisheries. Game and furs.
- **Contemporaneous.** — See Vir. and Md.

STUDY THESE TOGETHER :

NEW YORK AND NEW JERSEY.

- **When. Where. Why Settled. By Whom.**
  - Dates—1613-23, 1664.
  - Centers of settlement.
  - Causes that led to settlement.
  - Nationality.
  - Character of colonists.
  - An account of the Walloons and Patroons.
- **Government.**
  - Kind (see Vir. and Md.)
  - Governors.
  - What power in hands of the people.
  - Changes in government.
- **Religion and Education.**
  - Sects.
  - Colleges and public schools.
  - Literature. Printing.
- **Political Religious Indian** TROUBLES.
  - Tyranny of governors.
  - Conquest of New Sweden.
  - Troubles with English Colonies.
  - New Jersey land titles.
  - No religious troubles.
  - Indian massacre and war.
- **Noted Men.**
  - Stuyvesant.
  - Capt. Kidd.
  - Leisler.
- **Customs.**
  - Architecture.
  - Utensils. Dress.
  - Social customs.
  - Apprenticeship.
  - Money and trade.
- **Events.**
  - Review important points.
  - Negro plot.
  - Slavery—compare with other Colonies.
  - Claim to Vermont.
  - Origin of names.
  - Rank of Colonies in pop. and wealth.
- **Productions.**
  - Products of the soil.
  - Game and furs.
- **Contemporaneous.** See Vir. and Md.

STUDY THESE TOGETHER :

PENNSYLVANIA AND DELAWARE.

- **When. Where. Why Settled. By Whom.**
  - Dates—1638, 1682.
  - Center of settlements.
  - Causes that led to settlement.
  - Nationality.
  - Class of people.
  - Character of colonists.
  - Origin of Quakers.
- **Government.**
  - Kind (see Vir. and Md.)
  - Governors.
  - Voice of people in government.
  - Land grants.
  - Change in Delaware.
- **Religion and Education.**
  - Sect.
  - Characteristics.
  - Colleges and public schools.
  - Literature. Printing.
  - Libraries.
- **Political Religious Indian** TROUBLES.
  - Boundary line (Mason and Dixon's).
  - Between proprietors and the people.
  - No religious or Indian. Why.
- **Noted Men.**
  - Penn.
  - De la Ware.
- **Customs.**
  - Architecture.
  - Utensils. Dress.
  - Church customs.
  - Social customs.
  - Occupation.
- **Events.**
  - Review important points.
  - Slavery.
  - Treaty with Indians.
  - Buying proprietor's rights.
  - Rank of Colonies.
- **Productions.**
  - Products of soil.
  - Furs.
- **Contemporaneous.** See Vir. and Md.

STUDY THESE TOGETHER :

NORTH CAROLINA.

When. Where. Why Settled. By Whom.
- Dates—1663, 1670, 1733.
- Centers of settlement.
- Causes that led to settlement.
- Nationality.
- Class of people.
- Character of colonists.

Government.
- Kind (see Vir. and Md.)
- Grand Model.
- Governors.
- Changes in form of government.
- Land grants.

Religion and Education.
- Sects.
- Why public schools did not flourish in Southern Colonies.
- Higher education.
- Literature.

SOUTH CAROLINA.

Political Religious Indian TROUBLES.
- Cause of trouble with Spanish settlement.
- Attacks on St. Augustine, Savannah, Charleston.
- No religious trouble. Why.
- War with Indians—
- Cause. Events. Result.

Customs.
- Occupation.
- Utensils. Dress.
- Plantations.
- Social customs.

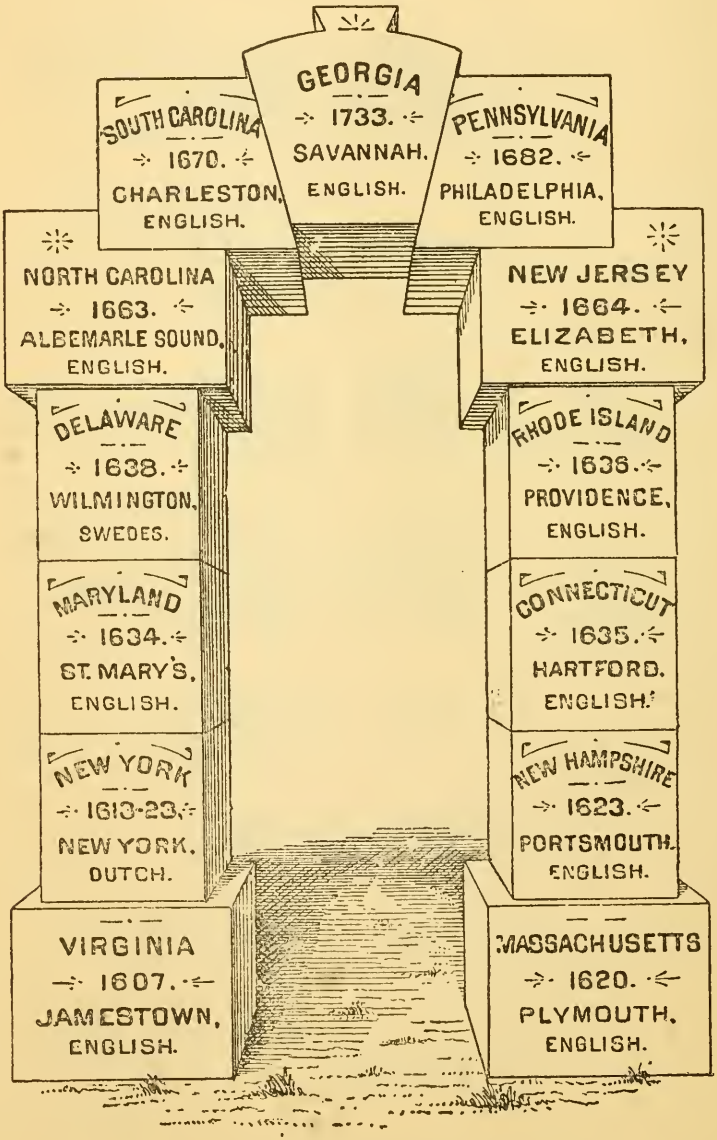
GEORGIA.

Noted Men.
- Oglethorpe.
- Wesley.
- —hitfield.

Events.
- Review important points.
- Slavery.
- Rank of Colonies.

Productions.
- Products of soil, Rice. Indigo. Cotton.
- Forest trees, Tar. Pitch. Turpentine.

Contemporaneous. See Vir. and Md.


GEORGIA
1733.
SAVANNAH.
ENGLISH.
SOUTH CAROLINA
1670.
CHARLESTON.
ENGLISH.
PENNSYLVANIA
1682.
PHILADELPHIA.
ENGLISH.
NORTH CAROLINA
1663.
ALBEMARLE SOUND.
ENGLISH.
NEW JERSEY
1664.
ELIZABETH.
ENGLISH.
DELAWARE
1638.
WILMINGTON.
SWEDES.
RHODE ISLAND
1636.
PROVIDENCE.
ENGLISH.
MARYLAND
1634.
ST. MARY'S.
ENGLISH.
CONNECTICUT
1635.
HARTFORD.
ENGLISH.
NEW YORK
1613-23.
NEW YORK.
DUTCH.
NEW HAMPSHIRE
1623.
PORTSMOUTH.
ENGLISH.
VIRGINIA
1607.
JAMESTOWN.
ENGLISH.
MASSACHUSETTS
1620.
PLYMOUTH.
ENGLISH.

INTERCOLONIAL WARS.

See Higginson's History, page 142 to 158.

These wars may be studied in connection with History of New England, or as represented on chart.

See questions on chart.

The first three wars are not sufficiently important to receive much attention.

KING WILLIAM'S.

In the first three wars, examine *European History* to find cause, and show *how* and *why* the Colonies became involved. Why and how were New England and New York invaded in the first war. How did the English colonists retaliate. Points in the Treaty of Peace.

QUEEN ANNE'S.

In the second war, ascertain why the Southern Colonies were engaged. What Colonies suffered most, and why. Points attacked. England's gain. Why did the French fortify Cape Breton.

KING GEORGE'S.

In the third, cause and result.

FRENCH AND INDIAN.

In French and Indian war, draw a map, and locate important points.

Causes of war, and why so called.

Compare population and extent of territory of French and English at commencement.

Call attention to mode of fighting, kind of arms, fortifications, and treatment of prisoners.

A short account of noted men of the Colonies who served in this war. Why England failed at first. Objective points. Why so called. A short account of the capture of each.

To what extent did England and France aid the Colonies.

Noted Englishmen and noted Frenchmen of the war.

Points in the Treaty of Paris.

In describing a battle, the following formula may be used :

Battle. { Where. When. Commanders. Why fought. Grand Tactics. Special incidents. Results.

REVOLUTIONARY WAR.

In order to understand and appreciate the strategy displayed by the officers of the American and the British armies during this war, the geographical features of the theatre of war must be studied. A military writer says: "From the usual formation of armies by right, center, and left divisions, there is derived an analogous geographical separation into right, center, and left zones, or belts of operation. Thus, from New York as a base, there is developed, as the right zone, New England, and as the left zone, the Southern States."

The British soon perceived that New York, from its central position, was the strategic point of the war. They accordingly took possession of it at the earliest opportunity.

A wise counter strategy devolved upon the American commander the necessity of holding the central zone so firmly as to threaten New York, and at the same time support the other zones. His location, during the greater part of the war, amid the hills of New Jersey and in the Highlands of the Hudson, enabled him to fulfill the best strategic conditions of ultimate success.

Sketch on the black-board, and require pupils to draw on paper, a map of that part of N. A. south of the great lakes and east of the Miss. river. As you progress in the study of the war, locate important points and trace route of armies, etc.

CAUSES OF REVOLUTIONARY WAR.

Character of Colonists.—Immigrated to escape religious, political, and other persecutions. How was this a cause.

Effect of isolation and self-dependence.

Character of Governors.—How appointed. Extent of power. Personal character of the governors. How were these causes.

Legislation.—Navigation Acts. Acts of Trade. Stamp Act. Quartering Act. Tea Tax. Boston Port Bill. Smuggling and Writs of Assistance. Why the colonists opposed taxation. How were these causes.

Intercolonial Wars.—Effect in training officers. Effect in educating the people. Effect upon public debt of Great Britain. Influence of France. How were these causes.

Colonial Congresses—1754.—Where. Why. Franklin's plan.

1765.—Where. Why. What was done.

1774.—Where. Why. What was done. How were these causes.

Character of the King.—Power of the king at this period. Personal character of George III. How were these causes.

EVENTS OF 1775.

Comparative population and military resources of England and the Colonies.

Why Canada and Florida did not rebel.

Object of the Colonies at first.

Lexington and Bunker Hill.—Use formula on page 17. Draw a diagram of Boston and vicinity.

Ticonderoga and Crown Point. — Where. How captured. By whom. Value of the capture. Captured ordnance—how used.

Congress of 1775.—Where. Delegates. How conducted. Appointing officers and raising army. Financial measures. What power had Congress.

Expeditions to Canada.—Object. Plans of expeditions. Montgomery's campaign. Arnold's campaign. Results. Winter quarters.

Siege of Boston.—How conducted.

EVENTS OF 1776.

The Hessians.—Who. Why and how employed. Number.

Evacuation Canada.—Why. Pursuit by the British. General results.

Evacuation Boston.—Why the British left. Condition Colonial army during siege.

Charleston.—Attempted capture by the British. How defended. Result. Gen. Lee, Moultrie, Jasper.

Declaration of Independence. — Its origin. Committee that prepared it. Who wrote it. Debate in Congress. Effect on the Country.

Battle Long Island.—Use Formula. Draw a diagram of New York and vicinity.

Washington's Retreat.—Nathan Hale. Harlem and White Plains. Capture of Forts W. and L. Retreat across N. J. Capture Gen. Lee.

Trenton and Princeton.—Use formula.

Winter Quarters.—Where. Why

EVENTS OF 1777.

British plan of campaign.

Burgoyne's Invasion.—Plans. Rendezvous. Indians. Capture of forts, and battle Hubbardton. Condition of Schuyler's army. Leger's expedition. Object. Incidents. Result. Bennington and battles of Bernis's Heights—See Formula. Clinton's attempt to assist Burgoyne. What was done with Burgoyne's army.

Howe's Movements.—Why he went to the Chesapeake. Brandywine or Chad's Ford—See Formula. Effect of Washington's movements upon Burgoyne. Germantown—See Formula. Story of Mrs. Darrah. How Phila. captured the British army. Val. Forge—where. Condition of army. What Steuben did. Account of La Fayette.

Congress. — Conway Cabal—What. Who. Result. Flag—What. Who designed it. Signification of the colors. What flag prior to this. Articles Confed.—What. When proposed. Who drafted. When to go into effect.

EVENTS OF 1778.

French Alliance.—What. Franklin's services. Effect of Burgoyne's surrender. Aid from France previous to this. British commissioners.

Evacuation Philadelphia. — Why. How. Change of commanders. Monmouth—Use formula.

Cherry Val. and Wyoming.—Where. What. Result.

Newport.—Why attacked. French aid. Result.

Clarke's Expedition.—Where. Why. What. Incidents.

Savannah.—Capture by British. Why France, Spain, and Holland went to war with England—Effect upon Revolutionary war.

EVENTS OF 1779.

Why the war was carried to the South.

Why no military movements until Fall.

Savannah.— Account of the attempt to recapture. Why a failure. Who was killed.

Washington's Army.—Where. Its condition. Treatment of prisoners by British. What La Fayette did in France.

British Raids.—Up the Hudson. In Connecticut.

Capture Stony Point.—Who. How. Why. Result.

Sullivan's Raid.—Object. Where. Clinton's aid. Battle Chemung. Results of expedition.

On the Ocean.—Our navy. What were Privateers. What they did. Naval heroes.

EVENTS OF 1780.

Winter Quarters.—Where. Why. Condition of army.

Charleston.—How captured. Who. Results.

Camden and King's Mountain.—Use formula.

Southern Condition.—Treatment by the British. What the Tories did. Exploits of Marion, Sumter, Pickens, and others. Greene sent in place of Gates.

Arnold's Treason.—Review Arnold's previous career. Value of West. Pt. Cause of treason. Planning of Arnold and Andre. Capture of Andre. Arnold's flight. Death of Andre.

French Aid.—Value to date. Arrival of French fleet. What it did.

Finances. — Value Continental Bills. What Morris had done.

EVENTS OF 1781.

Articles Confed.—Went into effect. Why the delay.

Mutiny.—Where. Why. How. What was done.

Cowpens.—Why so called. Use Formula.

Retreat of Americans.—Why. How. What Greene did. Cornwallis's efforts. Incidents. Result.

Guilford Court House; Hobkirk's Hill; Eutaw Springs.—Use Formula.

Review Greene's work. What the Southern patriots did.

British raids in Vir. and Connecticut.

Yorktown.—Why Cornwallis went to Vir.

Washington's plans. La Fayette's work.

French fleet and army. Siege. Clinton's aid. Surrender. Effect.

Condition of army and country to 1783.

Why peace was not declared until '83.

Points in the Treaty.

REVIEW OF THE WAR.

Cost to England. To Colonies. Number of soldiers.

Value and kind of foreign aid.

History of Congress during the war.

Special services of Franklin, Jefferson, Adams, Hancock, Henry, Paine, Hamilton, Morris, during the war.

Short biographies of noted officers.

Short financial history of the war.

Origin of terms, "Tory" and "Whig."

Why England failed.

Noted Buildings.

Condition of the country from 1783 to 1789.

FORMATION OF CONSTITUTION.

Review Articles of Confederation.

Constitutional convention. — Where. When. Length of session. Noted men. President. Object. Why they made a *new* Constitution. The Constitution a series of compromises—Why, how, and what. Who put it in literary form. Incidents. Its reception by the people. Efforts of Hamilton, Madison, and Jay. When did it go into effect. Review its important features.

CONSTITUTIONAL HISTORY OF THE U. S.

You are now about to commence the study of the most important period of American History. It has been truly said, that history should not be merely a record of wars and battles. Much prominence should be given to the facts that are interwoven with the nation's progress in civil matters.

Our children are not, and never have been, sufficiently taught our country's *civil* history; and this fact is painfully evident in the limited knowledge of past legislation possessed by those whom we choose to govern us, to say nothing of the warfare-loving spirit which such a training engenders.

It is said that history repeats itself; and, reasoning from this, we rightly infer, that the man who is familiar with past Political History will make a good legislator, since he will find his knowledge a just criterion for the settlement of present civil questions.

It seems to me, then, that a proper study of our history, and especially of this period, should instil into the minds of our youth a respect for *law*, and give them *nobler* and *broader* ideas in regard to Education and Labor; in short, a proper study of history should tend to develop a spirit of patriotism. By expanding the intelligence, by humbling vanity and pride, history aids greatly in forming good citizens, and "in a republic, good citizenship is next to godliness."

WASHINGTON, 1789 TO 1797.

Elections.—Nomination—What. How done. Why.

Vice-President.—How elected. Official duty. Salary.

Electoral College.—What. Where. History of Washington's election.

Inauguration.—What it is. When. How. Where. President's address. Salary of President Duties of President. Annual message.

First Congress.—Where it met. How organized. Election of members. Salary. Duties of both houses. Principal business first Congress. Constitutional amendments—What. How. Cabinet—What. Duties. Washington's Cabinet. History Hamilton's financial plans. How, why, and where the capital was located.

N. C. and R. I.—Why they did not accept Constitution sooner.

Troubles.—Indian—Where. Why. Expeditions against them. Results.

French.—Cause. What was done. How settled.

Spanish.—Cause of trouble. How settled.

English.—Cause. Jay's Treaty. How received.

Algerine.—Cause. How settled. Why pay tribute.

Internal.—Whisky rebellion. Why. How settled.

Cotton Gin.—What. History of the invention. Effect upon cotton and slavery.

Political Parties.—What parties. Origin. Principles of each. Leaders. Benefit of parties.

States Admitted.—What. How admitted. What requirements. What is a Territory.

Farewell Address.—What. Why. Effect upon people.

Mt. Vernon.—A short history of it—past and present.

ADAMS, 1797 TO 1801.

Election.—By what party. Meaning of election.

French Difficulties.—Cause. Extent. How terminated.

Alien and Sedition Laws.—By whom passed. Why. Provisions. How received. Results.

Washington's Death.—When. How. Effect upon the people.

Seat of Government.—Removal. Condition of the city. District of Columbia—What. Why formed. Extent. How governed.

JEFFERSON, 1801 TO 1809.

Elections.—What party. How elected. Meaning. Jefferson's policy. Annual Message.

Louisiana Purchase.—Object. Why France sold it. Extent of La. Amount paid. Review the history of La.

Troubles.—Tripolitan War—When. Why. Result. England and France—Causes, Orders, and Decrees. Effect upon U. S. Embargo Act. Results.

Burr and Hamilton.—Cause of Duel. Account of it. "The Code" at that period. Review the career of Hamilton. Review career of Burr, and give subsequent history.

Lewis-Clarke Expedition.—Where. When. Why. Result.

12th Amendment.—Principal features. Why made.

The Steamboat.—Who invented. Where. Improvements since. Effect upon commerce.

West Point.—Where. What. Effect. How students enter.

Indian Policy.—An account of the dealings of the United States with the Indians (See a "Century of Dishonor").

Ohio.—Short account of North-West Territory.

MADISON, 1809 TO 1817.

Elections.—What party. Meaning of election.

Indian War.—Where. Cause. Account of it.

War of 1812.—Causes (see Chart). How were these causes of war. Why the Federalists opposed the war.

War Policy.—United States—Why invade Canada and how. On the ocean. Great Britain—Blockade of coast. Draw a map of theatre of the war.

Hull's Campaign.—Where. Why. Results.

Queenstown's Heights.—Why a failure. What are Militia.

Naval.—Condition of U. S. navy. Of the English. Short account of naval battles (see Chart). What are Privateers. Letters of Marque. What Privateers did.

1813.—Account of plans to invade Canada.

Capture York by army of the center.

Army of the west—Commander. Account of Forts Stephenson and Meigs. Battles on Lake Erie and The Thames—Use formula. See Chart for naval battles. Account of Indian war in south.

1814.—Battles (see Chart)—Use formula. Ravages—On the coast of N. E. Capture of Washington. Attack on Baltimore. Account of "Star-Spangled Banner." See Chart for naval battles.

Hartford Convention.—What. Why. Its political effect.

Points in the Treaty of Peace.

Battle of New Orleans.—Use formula.

Sum up the results of the war.

War with Algiers.—Cause. What was done. Results.

U. S. Bank.—Review its History. Why re-chartered. What opposition.

MONROE, 1817 TO 1825.

Elections.—What party. Meaning. Condition of politics.

Prosperity.—Condition of the country. Why.

Indian Troubles. — Where. Cause. What done. Result.

Florida Purchase. — When. Why. Area. Amount paid. Gain to U. S.

Erie Canal.—Where. Cost and length. Why built. Effect. What agitation about internal improvements.

Mo. Compromise. — Cause. Clay's efforts. Provisions. Effect. Review the slavery question.

Monroe Doctrine. — What. Author of it. Caused by "The Holy Alliance" and rebellion in South America—Why.

An account of La Fayette's visit.

J. Q. ADAMS, 1825 TO 1829.

Election.—What party. How elected. Meaning.

Tariff.—Origin of word. Tariff in Europe. Define the two kinds—Revenue and Protection. Action of Congress. Why any opposition. Champions of it.

Death of Jefferson and Adams. — Review career of each.

Internal Improvements.—Position taken by political parties. Why. Railroads—Who invented. Account of first R. R. and cars. Effect. Compare American and English railroads and business management. What reforms needed.

JACKSON, 1829 TO 1837.

Elections. — What party. Meaning of the election.

Spoils System. —What it is. When, how, and why it originated. What Jackson did.

Finance.—U. S. Bank—Why vetoed. Effect. Public lands—What. How surveyed. How sold. Speculation in lands. What was the Specie Circular. Why issued. Effect. How and why the Public Funds were distributed.

Tariff.—Nullification—What and why. What compromise. Clay's efforts. Webster and Hayne.

Internal Improvements. — What was done. What about "Pocket Vetoes."

Indian Troubles.—Account of Black Hawk war. History of Indian Territory. Why and how the Cherokees were removed. What trouble with Seminoles.

Political Parties. — Republican - Democrat. Its principles. Leaders. Whigs—Organization. Principles. Leaders. Efforts. Anti-Masons—Why organized. Principles. Leaders. Effect.

VAN BUREN, 1837 TO 1841.

Election.—What party. Meaning of election.

Finance.—Distributing Public Funds. History of State Banks. Wild speculation. Account of the Specie Circular. Excessive importation. Fire in N. Y. How were these causes of the panic of 1837. Action of Congress. What was the Sub-Treasury Bill. Its effect.

Relation with England.—Short history of the Canadian rebellion.

Progress.—At the end of the first half century, make the following review:

IMMIGRATION—Why. Number. Nationality. Effect.

COMMERCIAL—What. How. Compare with England and France.

POLITICAL—What. Why. How. Leading Statesmen.

EDUCATIONAL—What. Public schools in North and South. Educators.

LITERARY—Noted productions. Noted authors. Newspapers.

RELIGIOUS—What. Noted Ministers. Churches.

INVENTIONS—What. Inventors. Effect.

HARRISON AND TYLER, 1841 TO 1845.

Election.—What party. Meaning of election.

Harrison's Death.—Cause. Effect. Tyler's position.

Troubles.—Veto of Bank Bill. Effect. Boundary line—Where. How settled. Account of Dorr's rebellion.

Texas.—Short history. What opposition to annexation—Why. When and how did it become a part of the U. S.

The Telegraph.—What. Who invented. Short history of it—past and present.

Mormons.—Origin of sect. History of Mormon Bible. Leading men. Troubles in Mo. and Ill. Emigration to Utah.

POLK, 1845 TO 1849.

Election.—What party. Meaning of election.

Account of settlement of North-western Boundary.

Mexican War.—Cause. Why unpopular in New England. Draw a map of the field of operation, and use as in Revolutionary War.

Taylor's Campaign.—Where. Object. Short account of battles. Result.

Scott's Campaign.—Where. Object. Short account of march to City Mexico. How the city was defended. Capture.

Campaign in Cal. — Account of Fremont's work. What Sloat and Stockton did. Account of Kearny's expedition. Results.

Treaty of Peace.—Where. Why. Provisions. Cost and gain. Why our army was always successful.

Gold in Cal.—When, how, and where discovered. Effect.

Wilmot Proviso. — What. Why offered. Effect.

Parties.—What. Their principles. Leaders.

TAYLOR AND FILLMORE. 1849 TO 1853.

Election.—What party. Meaning of election.

California.—Why it wished to be admitted. Had it been a Territory. What opposition to admission. Compromise Act — What called. Name its seven points (see Johnson's History of Politics). Why these points were made. Effect. Clay's work.

Taylor's Death.—When. Cause. Effect.

Troubles. — Filibustering — What. Where. Result.

Fisheries—What trouble. How settled.

Arctic Expeditions.—Object. Voyages. Results.

Death of Calhoun, Clay, and Webster. — Review the career of each.

PIERCE, 1853 TO 1857.

Election.—What party. Meaning of election.

Japan.—What treaty. Why made. Result.

Gadsden Purchase. — What. Why. Area. Amount paid.

World's Fair.—Where. Object. Results.

Kansas-Nebraska Bill.—Origin. Provisions. Author. Effect.

Parties.—See Chart. Principles. Leaders.

BUCHANAN, 1857 TO 1861.

Election.—What party. Meaning of election.

Mormon Trouble.—Cause. Result. Review history of Mormons.

Telegraphic Cable. — Where. How laid. Who. Describe it. Number at present. Effect.

Dred Scott Decision. —What. Why made. Effect.

John Brown Raid.—When. Where. Why. Result. Effect upon the country.

Secession.—What. Why. Attitude of the President.

LINCOLN, 1861 TO 1865.

Election.—What party. Meaning. History of political parties at this period.

Montgomery Convention.—Why held. What was done.

Southern Confed.—What States. Capital. Points in their Constitution. Slavery.

Civil War. — What. Causes — See Ridpath and Vol. I of Draper. Condition of army and navy. War efforts in the South. Capture of Sumter. Effect. Draw a map of the field of operation, and use as in Revolutionary War.

Campaigns in W. Vir. and Mo. — Object. Officers. Results.

Battle Bull Run.—Use Formula. Effect upon North and South.

Blockade.—What. Object. Extent of coast. Why difficult. Our navy. What England did.

Foreign Relations. — Attitude of England, France, and others. Account of the Trent affair.

CIVIL WAR, 1862.

Plan of the Campaign.—See Chart. What preparations. Officers. General-in-Chief.

Forts.—Account of capture of Forts Henry and Donelson. Effect of the capture.

Battle of Shiloh. — Use Formula. Noted General killed.

Bragg's Expedition.—Where. Why. Perryville. Result.

Western Battles.— See Chart and use Formula.

Mississippi River.—See Chart and use Formula.

Coast.—Account of capture of forts on coast of N. C., S. C., Ga., and Fla. Effect. Monitor and Merrimack—Where. History and description of both vessels. What was done by Merrimack. Result of fight. Effect upon naval warfare.

Peninsula Campaign.—Where. Who. Account of it. Result.

Jackson's Raids.—Where. Why. Effect.

Lee's Invasion. — Where. Why. Battles. Result.

Fredericksburg.—Use Formula.

CIVIL WAR, 1863.

Emancipation.—Preliminary in '62. Date. Provisions. Effect.

The West.—See Chart and use Formula.

The East.—Change in officers. Chancellorsville — Use Formula. Lee's second invasion—Why. Where. Gettysburg—Use Formula.

Coast.—Account of siege of Charleston. Capture Galveston.

Draft Riot.—What is a draft. How made. Trouble—Where. Why. Result.

CIVIL WAR, 1864.

Lieutenant-General.—Who. Why. Previous officers of this rank.

Campaigns.—Grant's plans. Account of his operations. Sherman — Where. Object. Capture of Atlanta and march through Georgia. Thomas — Where. Fight with Hood. Result. Raids—What Early and Sheridan did.

Red River Expedition. — Object. Who. Result.

Coast. — Capture Wilmington and forts of Mobile. Effect.

Confed. Cruisers. — Where made. Kind of vessels. Nassau — Where and what. Alabama and Kearsarge. Effect of blockade running upon the war.

CIVIL WAR, 1865.

Movements.—Grant's. Where. What done.
Sherman—Where. Object. Result.
Surrender—Lee and Johnson. When. Where. Number men. To whom. Terms.

Lincoln. — Account of assassination. Effect upon the nation. Review his life.

Davis.—What, after fall of Richmond. What reward offered, and why. Account of capture. What was done with him.

REVIEW OF CIVIL WAR, 1861 TO 1865.

Cost and Debt.— Number of soldiers killed and wounded on both sides. Amount of property destroyed and money expended on both sides. Debt of both. Effect on England.

Finance. — Greenbacks — What. Amount issued. Value at various times. General effect. Account of Confed. currency.

Banks—Kind. When. How secured. Effect.

National Bonds—What. Amount issued. Interest. When due. Value.

Confed. Bonds—Amount issued. Who bought them. Value. Cotton.

Commissions. — Account of Sanitary and Christian.

Conduct of War.—Principal plans of Nation and of Confederacy. General-in-Chiefs of both. Prominent officers. Equipment of soldiers. Military inventions.

Results.—Abolition of slavery. Nationalization.

JOHNSON, 1865 TO 1869.

How made President. Short biography.

Amnesty Proclamations. — What. Why. Effect.

13th and 14th Amendments.—Points in each. Why made. Effect.

Reconstruction.—What. Account of Johnson's plan. Plan of Congress. Which prevailed. States admitted. Effect.

French in Mexico.—When. Why. What was done. Attitude of the U. S. Results.

Congress.—See Chart—Why passed. Provisions of each. Effect.

Impeachment of President.—What. Why. Account of the trial. Result.

Alaska. — Why bought. Of whom. Area. Amount paid. Value.

Chinese Treaty.—What. Why. Effect.

Atlantic Cable.—Projector. How laid. Cost. Result.

GRANT, 1869 TO 1877.

Elections.—What party. Short history of both elections.

15th Amendment.—What. Why. Provisions. Effect.

Washington Treaty.—What. Why. Provisions. Alabama claims—What. History of the settlement.

Fishery Trouble—What. How settled. Boundary in N.W. What. Who. Result.

Reconstruction.—What States. Condition of South.

Pacific R. R.—Where. Length. Why built. How built. Cost.

Great Fires. — Where. Amount destroyed. Effect.

Finance.—See Chart—Short account of each.

Indian Affairs.—Number of Indians. Condition. Where. Agents.

Death of Noted Men—Who.

HAYES, 1877 TO 1881.

Election.—What party. History of election.

Electoral Commission.—What. Why. Result.

Civil Service Reform. — What is meant. What was done.

Southern Policy.—What was done. Effect.

Silver Bill.—Why. Provisions. Effect.

Chinese Bill.—What. Action of President. Why.

Grant's Tour.—Where. Object. History.

GARFIELD AND ARTHUR, 1881 TO 1885.

Election.—What party. Meaning of election.

Civil Service.—Power of President to nominate. Power of Senate. What is the "Boss System." Account of trouble between the President and Conkling.

Assassination of Garfield. — Why. How. Effect upon the country.

The Assassin.—Who. Trial. Punishment.

Arthur as President.—Principal events in his term.

Progress.—Immigration—Why. Nationality. Number. Effect.

Commercial — What. How. Compare with European nations.

Political—Review career of prominent Statesmen. What reforms.

Educational — Compare past and present systems. Educators. Questions of to-day.

Literary.—Noted authors—their works. Newspapers.

Scientific—Scientists. What each has done.

Religious—History of denominations. Noted ministers.

Inventions—What. Who. Effect.

Military—Improvements in ordnance. Fortifications. Discipline. Navy.

Territorial Growth — Review acquisition of territory. Admission of States. Condition of Territories.

QUESTIONS FOR DISCUSSION.

Origin and history of the following terms:

American Fabius. Brother Jonathan. Uncle Sam. Swamp Fox. John Bull. Cradle of Liberty. Old Dominion. Expounder of the Constitution. White House. Rough and Ready. Old Ironsides. Stonewall Jackson. Little Giant. Squatter Sovereignty. Old Probabilities. Dixie. Whig. Tory. Know-Nothings. Sage of Monticello. Old Hickory. Find other terms, and give history.

Discuss the measures proposed by the Republican party to-day on Money, Legal Tender, Banking, Revenue, Taxation, Public Improvements, Limitation of Federal Authority, Civil-Service Reform, Free Trade, Protection, Immigration, Naturalization, Suffrage, Public Lands.

Make the same examination as to the Democratic party.

Enumerate the mistakes and bad measures of Government, as supported by the dominant parties in the past.

Why local issues should be independent of party.

Good and bad points in your State Constitution.

The influence of the different races on the nation's history.

The modification of history by physical features of the country.

The history of places, lands, and waters, suggested by the name.

Influence of women upon progress of the country.

A history of the rise and fall of slavery.

The influence of the most celebrated inventions.

The influence of foreign nations in wars, in commerce, in education.

The influence of freedom of conscience, of schools, of speech and press, of ballot.

Progressive changes in living, dwellings, furniture, art decorations, dress, food, literature and newspapers, etc., etc.

PHYSIOLOGY.

The chief purpose of this study, as a branch of common school instruction, should be, to give useful, practical knowledge of the laws of health. Too much attention is usually given to memorizing technical terms of anatomy. Only those terms should be introduced that are necessary, in order to deal intelligently with the main subject.

The black-board may be used to good advantage by the pupils in representing various parts of the human body; "but, for several important parts of the subject, there is no better apparatus than that which can be procured at any butcher's shop, such as the lungs and windpipe of a sheep; the heart and diaphragm; the brain and the bony cavity which contains it; the eye; portions of the spinal cord and nerves; portions of limbs showing the relations of muscles, tendons, ligaments, and joints, etc., etc."

By a little study and practice, any teacher can acquire the skill necessary for a proper dissection before the class of all important parts of the bodies of animals.

The following books are recommended as good works for the teacher's desk:

Physiology for Practical Use.—By James Hinton, $2.

The Youth's Health Book.—Harper's Half-Hour Series, 25c.

Healthy Houses.—Harper's Half-Hour Series, 25c.

How to Take Care of Our Eyes.—By Dr. H. C. Angell, 50c.

Five Senses of Man.—By Julius Bernstein, $1.50.

Dalton's, Cutter's, Steele's, and Hutchinson's School Physiologies.

THE HUMAN SKELETON.

See Chart for number, arrangement, etc., of bones.

The Skeleton.—Uses of the skeleton. Number of cavities. Why it is the image of death. Analyze poetry on Chart—"Lines on a Skeleton."

The Skull.—Shape and size in different races and persons. Number and names of bones.

Structure—How and why. Articulation.

The Face. — Number. Names. Forms. Functions.

Spinal Column.—Number. Names. Structure and form. How held together. Movements. Canal.

Pelvis.—Number. Names—Origin. Functions.

Ribs and Sternum.—Number. Names. Functions. Cavities—Contents. Effects of fashion.

Os Hyoides.—Position. Form. Function.

Shoulder.—Number. Names. Form. Functions. Articulation.

Arm and Hand.—Number. Names. Form. Functions. Articulations. In what lies the perfection of the hand.

Leg and Foot.—Number. Names. Form. Articulations. Functions. What makes the step elastic.

Composition. — Earthy and animal — Why. Experiments to show animal and mineral.

Structure. — Usually an outer and an inner plate, with cellular substance between — Why. Marrow—What, Where.

Growth and Repair. — Ossification — What and how. Circulation of blood. How a broken bone is repaired.

Forms.—See Chart. Object of different forms.

Uses.—See Chart. What bones are levers, and what protect organs.

Joints.—See Chart. Kinds—Where and why. Cartilage—What, where, and why. Synovia—What and why.

Membranes.—See Chart. Where. Structure. Functions.

Ligaments.—What. Where. Form. Functions. Difference between ligaments and tendons.

Hygiene.—Define. Effects of exercise upon bones. Of different qualities of food. Of natural and unnatural positions.

Diseases.—See Chart. Cause. Effect. Treatment. Select questions from Steele, p. 38, and Dalton, p. 40.

THE MUSCLES.

Analysis.—Structure — See Chart. Describe each.

Attachment.— What is meant by origin and insertion. Tendons — Structure, Functions, Strength, Size.

Arrangement.—See Chart. Number of layers in different parts—Why. Number of muscles in the body.

Functions.—See Chart. What is meant by voluntary and involuntary. Define flexion and extension. Why muscles contract and relax—Effect.

Form.—See Chart. Why of different form.

Strength.—What causes difference in strength of people. Compare with lower animals.

Color.—In different parts of the body, in different animals—Why.

Muscular Sense.—What it is. See page 72, Hooker's New Physiology, or page 51, Steele's.

Exercise and Rest. — Object of exercise. What kind to take. Amount. Time. Sunlight and pure air. Effects. Value of calisthenics and gymnastics. Compare ancient and modern kinds. Analyze poetry on Chart—"Muscular Exercise." Rest—Object, Time, Amount.

Fat.—What it is. Where. Its use.

Diseases. — See Chart. Cause. Effects. Treatment.

Read chap. 24, Youth's Health Book, and chap. 19, Hinton.

Select questions from Steele, page 57, and Dalton, page 40.

THE SKIN.

Structure.—See Chart. Describe each. Use of each.

Functions.—How and why protective. Removal of waste matter by the skin—What and how. Absorption—What and how, Effect.

Glands. — See Chart. Where. Describe. Functions.

Connective Tissue.—What it is. See Steele, page 66.

Color.—What. Where. How and why it differs in various races. Tan and Freckles—What, Cause, Effect, How to remove.

Bathing. — Object. Kinds —Water, steam, sun, etc. Time. Effects. Compare ancient and modern plans. Read chapter 8, Hinton, and Hutchinson—notes between pages 52 and 53.

Perspiration.—What is sensible — insensible. Cause. Functions.

Cosmetics. —What. Why used. Effects. Best.—Read poetry on Chart.

Clothing.—Its uses. Kind and color for different seasons. Silk, cotton, wool, linen, furs—when and how to wear. Ancient and modern compared. Effects of fashion.

Integuments.— Hair — Functions, Structure, How it grows, Cause of color, Change of color. Nails—Functions, How they grow, Care of.

Membranes. — Mucous — What and where, Use. Serous—What and where, Use.

Kidneys.—Location. Shape. Functions.

Diseases.—See Chart. Cause. Effects. Treatment. Read chapter 29, Health Book, and chapter 7, Hinton. Select questions from Steele, pages 79 and 80, and Hutchinson, page 52.

FOOD AND DRINK.

Chemistry.—See Chart. Define and give examples. Use of each kind.

Uses.—See Chart. Kind of food for each.

Kinds. — Animal and vegetable — Different kinds and value of each. Compare food of ancient and modern people.

Hunger and Thirst.—Cause. Effects. How satisfied. Seat of hunger and thirst.

Stimulants.—Name and state effects. History of—ancient and modern. Analyze poetry on Chart —"Look not upon the wine."

Quantity and Quality.—Depends upon what. Effect of climate. Define good and poor food—Effects of both. National foods. What minerals in food and drink.

Climate.—Effect upon the production. Why people in different climates and seasons use different food and drink.

Preparation.—Why food is cooked. Effects of bad cooking. Compare ancient and modern cooking. What attention among nations to-day.

Read chapters 20, 21, 22, and 23, Health Book. Select questions from Steele, page 156, and Hutchinson, page 79.

DIGESTION.

Teeth.—Structure. Parts. Temporary and permanent. Number and names. Cause of decay and toothache. How to preserve. Functions. Dentistry.

Tongue.—Structure. Functions.

Salivary Glands.—What. Where. Names. Functions.

Pharynx and Oesophagus.—Describe. Functions.

Stomach. — Position. Structure. Orifices. Functions. Gastric Juice. Sympathy between stomach and mouth.

Liver and Pancreas.—Location. Shape and size. Functions.

Intestines.—Location. Arrangement. Structure. Functions.

Lacteals and Mesenteric Glands.—Location. Structure. Shape. Functions.

Thoracic Duct.—Location. Extent. Function.

Spleen.—Location. Shape. Origin of name. Function.

Processes of Digestion.—See Chart. Describe each.

Diseases. — See Chart. Cause. Effects. Treatment.

Read chapter 6, Hinton, and chapter 18, Health Book. Questions on page 116, Dalton.

CIRCULATION.

Heart.—Location. Shape and size. Cavities. Compare two sides. Valves—Structure and use. Its sheath. Describe its action. Diseases. Words derived for heart—How and why.

Arteries and Veins.—Structure. Ramifications. Functions. Origin of names. Cause of circulation in each. Pulse. How to distinguish between arteries and veins. Capillaries—What, Where, Functions.

Lymphatics.—Location. Structure. Functions. Communications. Absorbents—What, Where, Functions.

Kinds.—See Chart. Describe each. Object.

Blood.—Composition. Color—What, Cause. Quantity. Globules. Change—What and where. Coagulation—What and why. Functions.

Diseases.—See Chart. Cause. Effects. Treatment.

History of discovery of circulation.

Read and analyze poetry—"The Living Temple." Read chapter 11, Hinton. Questions—Steele, page 129; Dalton, page 157.

RESPIRATION.

Nose and Larynx.—Describe each. Functions.

Trachea and Bronchia.—Location. Structure. Functions.

Lungs.—Location. Shape and size. Structure. Function. Compare with lower animals. Effects of compression.

Air Cells.—What. Where. Function. How the interchange of gases takes place.

Diaphragm.—What. Where. Structure and shape. Functions.

Muscles.—What. Where. Names. Effect of action.

Movements.—What. How made. Object of breathing.

Air.—Composition. What impurities. Read first 12 chapters, Health Book.

Animal Heat.—What the normal temperature. How produced. Read chapter 10, Dalton.

Diseases.—See Chart. Cause. Effects. Treatment.

Read chapters 10 and 16, Hinton. Questions on page 99, Steele, and page 147, Hutchinson.

NERVOUS SYSTEM.

Brain.—Divisions. Structure. Composition. Functions. Membranes. Size. Amount of blood required.

Spinal Cord.—Where. Structure. Compare arrangement of white and gray matter with brain. Connection between cord and brain.

Cranial Nerves. — Number. Distribution. Structure. Functions.

Spinal Nerves. — Number. Arrangement. Extent. Functions.

Sympathetic System.—Where. Structure. Extent. Functions.

Functions.—See Chart. What is meant by each.

Nervous Tissue. — What kinds. Peculiar properties.

Motion and Sensation. — What nerves the seat of each. Effects of injury. What is nerve force.

Reflex Action.—What. Its use. See pages 165–6–7, Hutchinson.

Sleep. — Cause. Effect upon the brain. Amount necessary at different periods of life. Best time. Effect of sleep by medicine. Dreams. Read chapters 14 and 15, Hinton.

Mental Work.—How it compares with physical in effect upon a person. Amount in a day. Read and analyze poetry—"Advice to a Hard Student."

Pain.—What. Effects. Its use.

Diseases.—See Chart. Cause. Effects. Treatment.

Read chapter 1, Hinton. Select questions from Steele, page 175–6, and Hutchinson, page 176.

THE EYE.

Form.—What. Why. Orbit—Describe it.

Coats. — See Chart. Location. Structure. Meaning of names. Functions of each.

Humors.—See Chart. Location. Structure. Shape. Functions.

Eyebrows, Lids, and Lashes. — Describe each and give functions.

Lachrymal Apparatus.—Locate and describe. Functions. Use of tears.

Muscles.—Number. Arrangement. Attachment. Functions.

Optic Nerve.—Describe and give function.

Color.—What and where. Describe the pupil.

Seeing.—How objects are seen. Why seen erect. Draw a diagram to illustrate. Advantage and influence of two eyes.

Education. — What kind. How to educate. Effect of culture.

Abuse.—How the eyes are injured. Effects.

Diseases.—See Chart. Cause. Effects. Treatment.

Read chapter 3, Hinton, and "How to Take Care of our Eyes."

THE EAR.

External.—See Chart. Describe. Functions.

Drum.—Its technical name. Location. Structure. Functions.

Tympanum.—Locate and describe. Bones—Names, Shape, Articulations, Use. Openings—Describe and give functions of eustachian tube, fenestra ovalis, and fenestra rotunda.

Labyrinth.—See Chart. Describe and give functions.

Auditory Nerve.—Where and how situated. Function.

Hearing.—Describe process. Short account of sound. How educated—Effects.

Ear-Wax. — What. Where. Functions. Abuse of.

Diseases.—See Chart. Cause. Effects. Treatment.

Read chapter 2, Hinton. Use questions on page 194, Steele, and 350, Dalton.

TASTE.

Tongue.—How it is an organ of taste. Papillæ—What, Where, Functions. What parts distinguish sour, sweet, and bitter flavors.

Nerve.—Name. Function.

Use and Abuse.—Object. Relation to other senses. How it is abused. Education—What, How, Effects of culture.

Read chapter 5, Hinton.

SMELL.

Nose.—This sense in what part. Why in the nose.

Nerve.—Name. Function. How it differs from other special nerves.

Use.—Object. Compare with lower animals.

Education.—What. How. Effects.

Injury.—How injured. Effect.

Read chapter 4, Hinton.

VOICE.

Locate and describe Larynx, Epiglottis and Vocal Cords. Functions.

Speech. — What. How produced. How modified.

Education.—What. How. Effects.

Injury.—How injured. Effects. Treatment.

DISEASE.

Define disease. Compare treatment in ancient and modern times.

Food and Drink.—Effect in producing disease.

Read chapters 15, 16, 17, 18, and 21, Health Book, and chapter 18, Hinton.

Air, Dust, Miasma. — What is impure air. Effects of dust, of decaying vegetation and animals.

Read chapter 6, Health Book.

Overwork and Idleness. — Effects of each.

Read chapter 20, Hinton.

Wounds.—Treatment—Compare ancient and modern.

Read chapter 30, Health Book.

Death. —What it is. Ancient and modern ideas. Ancient and modern ways of disposing of the dead.

HEALTH.

Exercise.—Amount and kind of physical and mental, for preservation of health. How exercise affects health.

Read chapters 20 and 21, Hinton.

Ventilation.—What. Best methods.

Read "Ventilation and Warming" in "*Healthy Houses,*" and chapter 16, Hinton.

Drainage and Sewerage.—Read "Sanitary Inspection" in "*Healthy Houses.*"

Cleanliness.—How it promotes health.

Temperance.—What. Compare customs of ancient and modern peoples.

Medicines.—What. Their uses. Their abuses. Patent medicines.

Disinfectants.—What. When and how to use.

Antidotes.—What. When and how to use.

Learn what to use for various poisons.

GEOGRAPHY.

I believe that all who are familiar with our common-school curriculum, will admit that too much time is devoted to the study of geography. Pupils commence the study at the age of eight or nine, and continue to memorize dry and useless details until they leave the grammar work at the age of fifteen or sixteen. Half of this time will suffice, if properly used.

The Topical Chart for which this manual has been prepared, is intended for the last year's work in geography. All that has been said in regard to the advantages gained by teaching history and physiology topically, is equally applicable to geography.

Swinton says, "Some geographers have been so much absorbed in showing how the earth was built up, that they have forgotten that, on its surface is the toiling race of *man*, and that it is on *his* account chiefly that the earth is an object of interest. This we may call the hobby of the *physical* geographers. The hobby of the purely *political* geographers is the opposite of this. They overlook the fact, that man on the earth is subject to the physical conditions of the planet, and that in each region, these conditions determine, to a great degree, the pursuits, character, and total life of the people inhabiting that region."

The great principles of astronomical geography, the structure and composition of the earth, the relations of the different parts of the globe to each other, the contour and relief of continents and countries, the effect of mountains and plateaus, of ocean currents and prevalent winds upon climate and productions, and all of these upon the political and social condition of the inhabitants of any country; these are the topics which may profitably occupy the time and engage the attention of teacher and student.

The teacher who is desirous of fitting himself thoroughly for teaching this interesting science, will find the following books valuable: — Houston's, Guyot's, and Maury's Physical Geographies; Harper's School Geography; Guyot's Earth and Man, $1.50; Popular Astronomy, by Newcomb, $4; Elements of Geology, by Le Cont, $4; The Earth, by Reclus, $5; The Ocean, by Reclus, $5; Dana's Two Years Before the Mast, $1.50; Du Chaillu's Wild Life under the Equator, $1.50; Mayne Reid's Cliff Climbers and Giraffe Hunters, each $1.25; Kingston's Voyage Around the World, $2; Sparks from a Geologist's Hammer, by Winchell, $2; Land of Desolation, by Dr. Hayes, $1.75; Cheever's Island World of the Pacific.

Geography.—Astronomical, physical, political—define each.

Earth's Position. — Draw a diagram on the board (see Chart), and locate the earth and other planets. Give distance in round numbers from the sun; compare its distance with that of other planets.

Earth's Orbit — Define; draw a diagram on a level surface to illustrate; why elliptical in form; compare form and length of orbit with orbits of other planets.

Form.—Show how the following points are proofs of rotundity:—Circumnavigation; appearance of ships at sea; shadow on the moon; appearance of Polar Star; appearance of clouds in the horizon; suspended weights; force of gravity; analogy; actual measurement.

Oblate Spheroid — Define and represent by an object. Show how the following points are proofs that the earth is an oblate spheroid:—Varying vibration of the needle; centrifugal force; analogy; measurement of degrees of latitude. Show, by an experiment with clay, or with apparatus, the effect of rotation in producing this form.

Size.—Compare with other planets. Circumference—what; length in miles; how ascertained.

Diameter—What; equatorial, 7924; polar, 7898; mean, 7912; round numbers, 8000; how ascertained.

Area—Square miles of water, of land; total; how ascertained.

Motions.—Rotation — define; what proofs. Rate per hour — about 1000 miles. Direction. Effects.

Revolution—Define. Draw a diagram (see Chart). What proofs. Direction. Time of revolution—rate, about 1000 miles a minute. Effects.

Precession of Equinoxes—What. How ascertained. Effects. Illustrate by spinning a top.

Through space with the Sun—How ascertained. Velocity—3500 miles per hour. Effects.

Inclination of Axis.—Define axis. Poles. 23° 28′. Direction toward North Star. Effects.

EFFECTS OF MOTIONS AND INCLINATION OF AXIS.

Day and Night.— Cause. Cause of variation in length. Length at the Equator, at the Tropics, at the Poles. Effects of day and night. Where on the earth's surface do the days begin.

Month. — Origin of name. Length of a lunar month. History of—see Encyclopedia.

Year.—What. Length in days. History of—see Encyclopedia.

Seasons.—What. Change—draw a diagram (see Chart), and show cause. What is meant by Vernal and Autumnal Equinoxes—Summer and Winter Solstices. History of—see Encyclopedia.

Latitude and Longitude. — Define each; how reckoned; greatest extent of each. Length of a degree in miles at the Equator. How and why degrees vary from the Equator to the Poles. Uses. History of—see Encyclopedia.

Time.—What. Name and define natural periods — artificial periods. What is solar time, sidereal time, mean time, time indicated by clocks. Indication of time—ancient and modern ways. Relation of longitude to time. How to find longitude from time, and time from longitude.

Circles.—Meridian—Define. Draw a diagram (see Chart) to illustrate position of the circles. Number and use of meridians. What is a prime meridian.

Equator.—Define. Its use. Origin of name.

Parallels.—What. Origin of name. Number and use. Show how they are *small* circles, and meridians *great* circles.

Tropics. — Define. Origin of names. Distance from the Equator in degrees — in miles. Cause of position. Uses.

Polar Circles.—What. Origin of names. Distance from Poles. Cause of position. Uses.

Zones.—Define. Number and names. Origin of names. Position and width. Boundary lines.

The Ecliptic.—What. Where. Its use.

Points of the Compass. — What are cardinal points. Origin of names. Other points. What is a compass. What is "boxing a compass." History of the compass. Use of the cardinal points. How to find these points.

Hemispheres.— Define. Draw a map of Eastern and Western (see Chart). What meridian is the boundary between.

Northern and Southern — Draw a map (see Chart), boundary line between. Comparative amount of land and water in each.

Land and Water—Draw a map (see Chart). Where is the center of the land hemisphere—of the water, boundary between.

Map Projection. — Mercator's. Show by a map what is meant by Mercator's projection (see Harper, page 12). Advantages and disadvantages of this projection.

Orthographic—Define. Represent by a map, and give use.

Stereographic—Define. (See Chart for kinds).

Map Drawing.—For an excellent plan, see Harper, pages 7 and 124.

Review Questions.—Show by a diagram, an angle, and what is meant by degrees, minutes, seconds. How often does the sun rise in the East in a year—why. What peculiar advantages does the earth have in regard to place in solar system. Velocity of motion. Eccentricity of orbit, and inclination of axis. If the earth's axis were perpendicular to its orbit, what imaginary lines would be removed. Compare the earth with same bulk of water. How is the weight of planets determined. Distance from earth to sun, and distance between planets determined. What may be called the *prime* parallel. How does the North Star indicate latitude. How may you find the North Star. What is there in the Southern Hemisphere to aid in determining latitude. What zones are not belts. What prevents the earth from flying off into space — from falling into the sun. Prove that the earth is an oblate spheroid. Prove that it rotates. What is meant by sensible and rational horizon. Define Zenith and Nadir, Perihelion and Aphelion. What are the directions of the earth's motions. Suppose the sun were suddenly destroyed, how would the earth move. What is the Zodiac. Show by a diagram that the earth does not move with the same velocity in all parts of its orbit. Compare rotation at the Equator and at the Poles, etc., etc.

THE SUN, MOON, STARS, AND COMETS.

See Chart for topics to discuss. If not full enough, the following, from Guyot, may be used :

I. Bodies composing the Solar System.

1. Sun, its rank.
2. Primary Planets, their number.
3. Satellites, number and relation to Primaries.
4. Asteroids, number and size.
5. Comets.
6. Grouping of Planets.

II. Primary Planets.

1. Relative position.
2. Comparative size.
   a. Law of increase. *b*. Size of first group. *c*. Size of second group. *d*. Total mass compared with sun.
3. Comparative density.
   a. Law of decrease. *b*. Specific gravity of small planets. *c*. Specific gravity of Jupiter and Saturn.
4. Planetary distances.
   a. Law of increase. *b*. Distance of small planets from sun. *c*. Distance of great planets from sun.
5. Satellites.
   a. To which group belonging. *b*. Number accompanying each great planet.

III. Movements within Solar System.

1. Rotary motion.
   a. Direction. *b*. Resulting measure of time. *c*. Centre.
2. Revolution around the sun.
   a. Direction of motion { Primary planets. Asteroids. Satellites.
   b. Measure of time. *c*. Revolution of comets.
3. Velocities of planetary motions.
   a. Law of variation in revolution. Examples. *b*. Law of variation in rotation. Examples.
4. Time of revolution.
   a. Law of variation. Example.
5. Axis of rotation.
   a. Law of position. *b*. General effect of inclination. *c*. Earth, degree of inclination. Results. *d*. Venus, supposed degree of inclination. Results.
6. Eccentricity of orbits. Definition.
   a. Mercury, comparative eccentricity. Results. *b*. Earth, comparative eccentricity. Results.

Illustrate eclipses and phases of the moon by diagrams. See Chart.

The Sun and Moon.—Study the means by which the distance, size, nature, and condition of these bodies have become known. Make a more complete list of topics for these.

GEOLOGY AND CHEMISTRY.

Define geology and chemistry, and state the difference between geology and physical geography.

Primary State.—What. State the nebular hypothesis.

Cooling.—Cause. State the general effects.

Convulsions.—Earthquakes—define. Kinds of earthquake movement. Effects—good and bad. Distribution. Theory of Earthquakes. History of—ancient and modern.

Volcanoes.—Define and describe. Distribution. Causes of volcanic action. Effects. History.

Slow Changes of Level.—Give an account of the slower changes of level that are constantly taking place in various parts of the earth, where rising, where subsiding. Probable cause.

Rocks.—Define. Classification—according to origin, igneous or aqueous; to condition, stratified, unstratified, and metamorphic; to arrangement of particles, crystalline or fragmentary; to contents, fossiliferous or non-fossiliferous; to constituents, siliceous, calcareous, &c.; to time of formation, primary, secondary, or tertiary. Describe these classes.

Geological Ages.—See Chart. Give a brief account of each. Speculations as to the age of the earth.

The Interior.—How we have obtained knowledge of the interior. Depth of exploration. Rate of increase of heat. Theories of condition of the interior (see Le Cont, page 80).

Land.—Composition—number of elements; describe principal ones. Changes—state and describe the changes in land made by winds, moisture—rain and frost, running water, action of waves, and by man. Divisions—name and describe the various natural divisions (see Chart).

Water.—An account of its elements (see Chemistry). Divisions—Name and describe (see Chart).

The Atmosphere.—Extent—how ascertained, probable height, relation to the other elements. Properties—elasticity, weight and pressure—what and how ascertained, density at different altitudes. Uses—state the natural and artificial. Composition—elements at present; how did its composition in early geological ages differ from the present.

GENERAL PHYSICAL GEOGRAPHY.

CONTINENTS.

Draw a map of each continent, when you begin to study it.

Position.—In what hemisphere. In what part.

Size.—Take North America as a standard, and compare others with it.

Contour.—Define. Compare general shape, indentations, and extent of coast line with North America. Contour-Forms — peninsulas, capes, and isthmuses. Describe each.

Relief. — Define. Relief distinguished from altitude. Relief forms—plateaus, mountains, plains, and valleys. Define each class, and represent on map with colored chalk.

Main Axis.—Define. Position in each continent (Guyot, pages 40 and 41).

Waters. — Coast — name and locate seas, bays, gulfs, and straits. Inland—Rivers—arrange topics from pages 48, 49, and 50 of Guyot, or, pages 59, 60, and 61, Houston. Lakes—arrange topics from pages 51 and 52, Guyot, or, pages 63, 64, and 65, Houston. Springs — arrange topics from pages 10 and 11, Guyot, or, pages 55, 56, and 57, Houston.

Islands.—Arrange topics from pages 43 and 44, Guyot, or, pages 37, 38, and 39, Houston.

THE OCEAN.

Divisions.—Name and locate each. Draw a map of the Atlantic, Pacific, and Indian Oceans (see Chart).

Extent.—Take the Atlantic as the standard, and compare others with it.

Depth.—Describe the manner and means of finding depth. Where deepest. Where shallowest. Character of the ocean bed.

Temperature and Composition. — Temperature in different latitudes, and at different depths. Composition of ocean water.

Currents.—Arrange topics from pages 65 and 67, Guyot, or, pages 73, 74, and 75, Houston. Draw a map (see Chart).

Tides and Waves.—Arrange topics from pages 61, 62, and 64, Guyot, or, pages 69, 70, and 71, Houston. Draw a diagram to illustrate (see Chart).

Color and Contents.—See page 58, Guyot, or, pages 67 and 68, Houston.

METEOROLOGY.

Define Meteorology, light, and heat.

Light.—Theories, sources, rate of movement, and how determined. Effects. Describe most important optical instruments.

Heat. — Theories. Sources. Relation between light and heat. Effects. Why warmer in the torrid than in the arctic region—Illustrate by a diagram. Why warmer at the surface than at an elevation.

Evaporation.—What. Process. Where greatest. Effects.

Dew.—What. Cause. Dew point. Effects.

Fog.—What. Cause. Fog regions. Duration. Effects.

Clouds.—What. Classes. Height. Uses. (See Guyot, page 84; Houston, 94 and 95).

Rain.—Cause. Laws of distribution. (Study map on Chart, and arrange other topics from Guyot, pages 88, 89, 90, 91, or, pages 96 and 97, Houston).

Hail and Snow. — Cause. Localities. Snow line in different zones. Effects.

Ice, Icebergs, and Glaciers. — Arrange topics from pages 94 and 95, Guyot, or, pages 100 and 101, Houston.

Arrange topics in a similar manner for Thunder and Lightning, Rainbows, Halos, &c.

Winds and Storms.—Arrange topics from pages 76, 77, 78, 79, 82, and 83, Guyot, or, pages 84, 85, 87, and 88, Houston.

The Weather Bureau.—What. An account of its work. (See Houston, pages 137, 138, 139).

CLIMATE.

Define climate. See Chart for elements—what and why.

Latitude.—Why, and how distance north or south of the Equator affects climate.

Altitude.—Why, and how difference in elevation affects climate. Rate of decrease in heat.

Mountains. — Why, and how mountains affect climate (Houston, 83).

The Ocean.—Why, and how nearness to, or distance from, the ocean, affects climate (Guyot, 73).

Winds. — Why, and how winds affect climate (Guyot, 72).

Slope and Soil. — Show why and how slope northward or southward, toward large bodies of water, or in the contrary direction, affects climate. Effect of different kinds of soil.

Isotherms.—What. Study the map on the Chart, and construct maps of other regions, as needed.

SPECIAL PHYSICAL GEOGRAPHY.

EUROPE,

ASIA,

AFRICA,

NORTH AMERICA

SOUTH AMERICA

AUSTRALIA,

ISLANDS.

Sketch an outline map of each division as you study its position and contour, and when you take up the topics of relief and waters, represent the mountains, plateaus, valleys, lakes, rivers, etc.

Position. — In what part of the Eastern or Western, Northern or Southern Hemispheres, bound it.

Contour.—Shape of outline, and condition of coast line. Take some one as a standard, and compare others with it.

Size.—Take North America as the standard—about 9,000,000 square miles—and compare others with it.

Relief. — Sketch in the mountains, plateaus, hills, deserts, plains, and valleys, and give a particular description — more in detail than given under general physical geography, as elevation and extent, slopes, character and condition, effects —physical and political, etc.

Waters. — Coast — locate and give origin of names of seas, gulfs, bays, sounds, and straits, position and extent, effects—physical and political, etc.

Flora.—Define. Arrange topics from Houston, commencing at page 109, or, Guyot, page 97.

Fauna.—Define. Arrange topics from Houston, commencing at page 120, or, Guyot, page 106.

Mankind.—Define ethnography, races—Caucasian, Mongolian, Malay, African, and Indian. Origin of names.

Distribution.—Nations belonging to each race and location. Number of people of each race. Origin of names.

Characteristics. — Color, features, language, civilization, religion, government, etc. See Houston, commencing at page 126, or, Guyot, page 114.

SPECIAL POLITICAL GEOGRAPHY.

Study the Political Divisions of each Grand Division, commencing with North America—(see Chart).

Use outline maps which were prepared for special physical geography.

Locate and bound the U. S., British America, Mexico, and Central America. In giving area, compare with U. S. without Alaska—about 3,000,000 square miles. In population, compare with U. S. —about 50,000,000.

After sketching boundary lines of grand political divisions, and studying the U. S. as a whole, according to topics on the Chart, sketch in the outline of your own State.

California.—Position—locate and bound. Give an account of the manner of locating and marking boundary lines.

Size.—Area of California, about 160,000 square miles. Use this as the standard by which to compare all political divisions of an area less than 1,000,000 square miles.

PHYSICAL FEATURES.

If not already on the map, represent these as you study them.

General characteristics of its surface—as level, undulatory, or mountainous.

Mountains and Hills. — Name and locate. Origin of names. Direction and extent. Peaks. Characteristics.

Plateaus, Plains, and Valleys. — Name and locate. Origin of names. Characteristics.

Coast Waters.—Name and locate. Origin of names. Extent. Characteristics.

Inland Waters. — Lakes — name and origin of name. Location. Size. Characteristics. Uses.

Rivers.—Name and origin of name. Locate and state system to which it belongs. Length. Characteristics. Uses.

Springs.—Name. Location. Characteristics. Uses.

Soil.—Kind, fertile or barren, etc.

Climate.—What. Show how it is modified by the above physical features.

PEOPLE.

Population. — Compare with California when less than 1,000,000; if greater, compare with U. S.

Race.—What race or races. Characteristics — produced by geographical position and climate.

History and Government.—Origin of Nation or State. Growth, incidents, progress, form and condition of government, etc.

Education and Religion.—Character and condition of common schools. Higher institutions of learning — name, locate, and describe important ones. Noted literary productions, great men, etc. Religion — what, condition, effect, church buildings, etc.

Industries and Productions.

Agriculture.—Condition. Extent. Implements. Kind of products, animal & vegetable—where, amount, why produced.

Commerce. — Exports. Imports. Extent. Means of transportation—railroads, canals, vessels. Its navy.

Manufactures.—Relative importance. Kind. Value.

Mining.—What metals. Where. Value.

Fisheries and Lumbering.—Locality of each. Kinds of fish and lumber. Value.

Chief Cities.—Name, where and why located, business, comparative population. Take some city, as San Francisco, for a standard. Noted buildings, history, etc.

Miscellaneous. — Under this head, arrange topics that apply specially to a particular State or Nation — such as foreign possessions, slavery, great projects, etc., etc.

GEOGRAPHICAL RECREATION.

Occasionally, a change from the regular topical work will be pleasant and profitable. By a little study, the teacher may arrange many interesting "variety" lessons. The following list may be indefinitely extended :

A good stereoscope, with a proper selection of pictures—geographical and historical—can be used to good advantage in this work.

Geographical scrap-books, kept by both teacher and pupils, are valuable helps.

A lesson on the barometer, thermometer, compass, etc.

Map drawing should receive special attention. Show pupils how to make neat outlines, and occasionally use the recitation time in representing mountains, lakes, rivers, etc. Any good manual of drawing will show how to do this work.

A journey to the Moon, Mars, Venus, etc.—Indicate by topics what information is desired. (See "From the Earth to the Moon" and "Around the Moon," by Jules Verne.)

A balloon voyage. — (See "Five Weeks in a Balloon," by Jules Verne.)

Equator, Tropics, and Polar Circles.—Land and water crossed by these ; helpful in fixing in the mind, location of points north or south of the Equator.

Land building.—Deltas; sandbars; islands—volcanic, coral, and sand; valleys, etc.

A ship voyage around the world. — Trace the most direct route, naming waters sailed over, and lands passed, etc. (See Jules Verne and Darwin.)

A voyage from one port to another.—The Market Reports of the daily papers, and the Shipping News, are very helpful in lessons of this kind ; by means of these, it will be easy to arrange journeys by which ships may be freighted with the exports of the several countries.

Visits to various kinds of manufacturing establishments—ship-yards, woolen mills, paper mills, etc., etc.

A visit to a mine—coal, lead, iron, salt, etc.

Lessons comparing the size of countries, lakes, rivers, etc.

Compare as to latitude, and explain difference in climate.

A lesson on longitude and time.

"Methods of Teaching," by John Swett, should be in the library of every teacher ; and some of the works of Marryat, Oliver Optic, Jules Verne, Ballantyne, Reid, and others, are valuable auxiliaries when properly used.

BANCROFT'S

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This Chart is designed to teach Geography orally to children on the object lesson system, and is a beautifully colored picture, in which all the divisions of the land and water are combined in an attractive manner, including mountain, hill, valley, plain, table-land, desert, oasis, island, peninsula, isthmus, cape, promontory, volcano, city, town, village, hamlet, ocean, gulf, bay, strait, harbor, lake, river, cataract, sound, archipelago, geysers, water-spouts, rainbow, ship-wreck, etc. This Chart is the most useful and popular piece of apparatus we have ever had, and, wherever used, has proved not only an ornament to the school-room, but an unfailing aid to the teacher and pupil. Each division is marked in large, heavy letters, so as to be easily seen across the room. It presents such an attractive picture, and is so entirely different from ordinary charts and maps, that the school children are very much interested with it. It should be in every school-room. Write for special circular.

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CHAS. H. ALLEN, Principal State Normal School.
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C. W. CHILDS. MISS M. J. TITUS.

Having seen the practical workings of your REVOLVING CHART, I take pleasure in recommending it as being well adapted to aid the Primary Teacher in training pupils to see quickly, think rapidly, and speak promptly. It should be in every Primary School.

Yours, etc.,
J. G. KENNEDY,
SAN JOSE, January 25, 1882. Principal San Jose High School.

DEAR SIR: Sister Superior cordially attached her signature to the accompanying certificate, and directed me to request you to send another machine for the select school, as we will require TWO OF THEM, having found the first one (after two months' use), to far exceed our expectation.

Respectfully yours,
SISTER TERESA.

COLLEGE OF NOTRE DAME, SAN JOSE, October, 5, 1881.

To Whom it May Concern: This is to certify that Frank P. Montgomery's REVOLVING CHART has been introduced into the College of Notre Dame. For simplicity of structure, ease of management, and perfect adaptation to the purposes for which it is designated, we think it unsurpassed by anything before the public.

Very respectfully,
SISTER MARIE CORNELIA, Superior.
SISTER TERESA, Principal of St. Joseph School. SISTER M. LIGUORI DE LA B. S.

A. L. BANCROFT & CO.,

SOLE MANUFACTURERS,

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San Francisco, Cal.